



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,219	11/09/2001	James B. Goddard	AES 107 P2	5658

7590 06/19/2003

Finnegan, Henderson, Farabow,  
Garrett & Dunner, L. L. P.  
1300 I Street, N. W.  
Washington, DC 20005-3315

EXAMINER

COLLINS, GIOVANNA M

ART UNIT PAPER NUMBER

3679

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/037,219

Applicant(s)

GODDARD ET AL.

Examiner

Giovanna M. Collins

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10,11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The declaration filed on April 2, 2003 under 37 CFR 1.131 is sufficient to overcome the Mexican Patent Application MX 9907382 to Fernandez reference.

### ***Claim Objections***

Claim 9 is objected to because it recites the limitation "the said two corrugations" in line 2. There is insufficient antecedent basis for this limitation in the claim, as this limitation has not been previously recited in claim 9 or claim 8 from which claim 9 depend.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2,4-9,11-12,14-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard ('209) in view of Bonnema et al. ('473).

Goddard discloses (see Fig. 2) an indeterminate length of pipe comprised of at least two corrugated sections of pipe joined by a coupler component, said coupler component having a male portion (18) and a female portion (20) to connect two of the corrugated sections, each corrugated section having a plurality of first corrugations (22), each of said first corrugations having a crest and a valley with the distance between the crest and valley of said first

Art Unit: 3679

corrugations being a first distance, said male portion of each corrugated section having at least one second corrugation (32), each said second corrugation having a crest and valley with the distance between the crest and valley of said second corrugation being a second distance that is less than said first distance, said male portion of each corrugated section having at least one third corrugation (42), each said third corrugation having a crest and valley with the distance between the crest and valley of said third corrugation being a third distance that is less than said first distance, said crest of said third corrugation having a recessed area (55) accommodating a sealing element (60), that is retained between said recessed area and said female portion, said female portion telescopically receiving said third corrugation and at least a portion of said second corrugation. Goddard does not disclose that the female portion has a reinforcing means that is generally aligned with the sealing means. Bonnema et al. teaches (see Fig. 9) a corrugated pipe connection with a reinforcing means (37) on an exterior surface. Bonnema et al. teaches that the reinforcing means holds the sections in position against any separation forces applied thereto (see col. 7, lines 16-20). Moreover, it would have been obvious to locate the reinforcing means in the generally area of the sealing means because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Therefore it would be obvious to one skilled in the art at the time of the invention to modify the pipe disclosed by Goddard to include the reinforcing means taught by Bonnema et al. to keep the pipe sections in position against any separation forces applied and to generally align the reinforcing means with the seal because rearranging parts of an invention involves only routine skill in the art.

Referring to claim 2, Goddard discloses wherein said pipe (12) is dual-wall.

Art Unit: 3679

Referring to claim 4, Goddard discloses, as modified, discloses the pipe of claim 1. Bonnema teaches (see Fig. 4) an intermediate corrugation (about element 23) located between a second and a third corrugation but does not teach the intermediate corrugation has a intermediate distance between the crest and valley that is greater than a third distance and less than a second distance. However, a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Therefore it would be obvious to one skilled in the art at the time of the invention to further modify the pipe disclosed by Goddard to have the intermediate distance of the intermediate corrugation be greater than the third distance and less than the second distance because a change in the size of a prior art device is a design consideration within the skill of the art.

Referring to claim 5, Bonnema et al. teaches a female portion wall member that telescopically receives all of a second corrugation and a third corrugation.

Referring to claim 6, Goddard discloses that reinforcing means comprising one of tape and adhesive layer and plastic and also comprises one of fiberglass, metal and carbon fibers and plastic fibers as well known in the art (see col. 1, lines 33-34)

Referring to claim 7, Goddard, as modified, discloses wherein said pipe (12) is water-tight.

Referring to claim 8, Goddard discloses (see fig. 2) connection between two sections of corrugated pipe, said pipe having a plurality of first corrugations (22), each of said first corrugations having a crest and a valley with the distance between the crest and valley of said first corrugations being a first distance, said connection comprising a male portion (18) integrally molded to one of said sections and a female portion (20) integrally molded to the other of said

Art Unit: 3679

sections, said male portion having at least one second corrugation (at 30), each said second corrugation having a crest and valley with the distance between the crest and valley of said second corrugation being a second distance, said male portion also having at least one intermediate corrugation (37) and at least one third corrugation (42), each said third corrugation having a crest and valley with the distance between the crest and valley of said third corrugation being a third distance, said crest of said third corrugation having a recessed area (55) in which a gasket is seated, said second distance and said third distance each being less than said first distance, said pipe having a gasket (60) in the recess. Goddard does not disclose that the female portion is greater in length than the intermediate and third corrugations. Bonnema et al. teaches (see fig. 4) a connection between two corrugated pipes where the female portion (at 15b) is longer than an intermediate and third corrugation (at 23). Bonnema et al. further teaches the connection has a strapping (37) to ensure that the coupling remains together regardless the magnitude of separation forces applied to it (see col. 7, lines 16-20). Therefore it would be obvious to one skilled in the art to modify the connection disclosed by Goddard to have the female portion be greater in length than the intermediate and third corrugations and the strapping as taught by Bonnema et al. to ensure that the connection remains together and watertight with the sealing gasket regardless the magnitude of separation forces applied to it.

Referring to claim 9, Goddard discloses two corrugations are the second and third corrugations (32,42).

Referring to claim 11, Goddard discloses wherein said female portion has at least one corrugation (72) thereon, and a pair of guide lines (at 80).

Referring to claim 12, Goddard discloses an indeterminate length of dual-wall plastic pipe comprised of at least two corrugated sections of pipe joined by a coupler component, said coupler component having a male portion (18) and a female portion (20) to connect said at least two corrugated sections, each corrugated section having a plurality of first corrugations (22), each of said first corrugations having a crest and a valley with the distance between the crest and valley of said first corrugations being a first distance, said male portion of each corrugated section having a single second corrugation (32), each said second corrugation having a crest and valley with the distance between the crest and valley of said second corrugation being a second distance that is less than said first distance, said male portion of each corrugated section having a single third corrugation (42) having a crest and valley with the distance between the crest and valley of said third corrugation being a third distance that is less than said first distance, said female portion wall member telescopically receiving said third corrugation and at least a portion of said second corrugation, said crest of said third corrugation having a recessed area (55) accommodating a sealing element (60), that is retained between said recessed area and said female portion. Goddard does not disclose that the female portion has a reinforcing means that is generally aligned with said sealing element. Bonnema et al. teaches that the reinforcing means holds the sections in position against any separation forces applied thereto (see col. 7, lines 16-20). Moreover, it would have been obvious to locate the reinforcing means in the generally area of the sealing means because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Therefore it would be obvious to one skilled in the art at the time of the invention to modify the pipe disclosed by Goddard to include the reinforcing means taught by Bonnema et al. to keep the pipe sections in position against any

Art Unit: 3679

separation forces applied and to generally align the reinforcing means with the seal because rearranging parts of an invention involves only routine skill in the art.

Referring to claim 14, Goddard discloses, as modified, discloses the pipe of claim 1. Bonnema teaches (see Fig. 4) an intermediate corrugation (about element 23) located between a second and a third corrugation but does not teach the intermediate corrugation has a intermediate distance between the crest and valley that is greater than a third distance and less than a second distance. However, a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Therefore it would be obvious to one skilled in the art at the time of the invention to further modify the pipe disclosed by Goddard to have the intermediate distance of the intermediate corrugation be greater than the third distance and less than the second distance because a change in the size of a prior art device is a design consideration within the skill of the art.

Referring to claim 15, Bonnema et al. teaches a female portion wall member that telescopically receives all of a second corrugation and a third corrugation.

Referring to claim 16, Goddard discloses that reinforcing means comprising one of tape and adhesive layer and plastic and also comprises one of fiberglass, metal and carbon fibers and plastic fibers as well known in the art (see col. 1, lines 33-34)

Referring to claim 17, Goddard, as modified, discloses wherein said pipe (12) is water-tight.

Referring to claim 18, Goddard discloses in a corrugated pipe comprising two sections joined by telescopically mating a male end of one section with a female end of the other section, the improvement comprising an annular sealing element (60) fixed to the exterior surface of the



Art Unit: 3679

male end and disposed to sealingly engage the interior surface of the female end; Goddard does not disclose an annular band of reinforcing material disposed around the exterior surface that is in general alignment with the sealing element. Justice teaches (see Fig. 7) a pipe with an annular band (34) on an exterior surface. Goddard does not disclose that the female portion has a reinforcing means that is generally aligned with the sealing means. Bonnema et al. teaches (see Fig. 9) a pipe with a reinforcing means (37) on an exterior surface. Bonnema et al. teaches that the reinforcing means holds the sections in position against any separation forces applied thereto (see col. 7, lines 16-20). Moreover, it would have been obvious to locate the reinforcing means in the generally area of the sealing means because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Therefore it would be obvious to one skilled in the art at the time of the invention to modify the pipe disclosed by Goddard to include the reinforcing means taught by Bonnema et al. to keep the pipe sections in position against any separation forces applied and to generally align the reinforcing means with the seal because rearranging parts of an invention involves only routine skill in the art.

Referring to claim 19, Goddard discloses wherein the annular sealing element (60) is disposed in an annular channel in the outer surface of the male end.

Referring to claim 20, Goddard discloses wherein each section includes opposed male and female ends (18,20) and the outside pipe diameter of each section between its respective male and female ends is substantially the same.

Referring to claim 21, Goddard discloses wherein the outside diameter of the female end (20) of each section is substantially the same as the outside pipe diameter.

Art Unit: 3679

Referring to claim 22, Goddard discloses wherein the male end includes at least two corrugations (32,42) comprising at least two axially spaced, annular crests and an annular valley therebetween, the two crests defining the outside diameter of the male end, and wherein the annular channel (55) is formed in one of the crests.

Referring to claim 23, Goddard discloses wherein the outside diameter of the male end (18) is selected to permit mating and sealing engagement with the female end (20).

Referring to claim 24, Goddard, as modified, discloses the pipe of claim 22. Bonnema et al. teaches a intermediate corrugation but does not teach the has an outside diameter greater than the male end. However, a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Therefore it would be obvious to one skilled in the art at the time of the invention to further modify the pipe disclosed by Goddard to have an intermediate corrugation with an outside diameter greater than the male end diameter because a change in the size of a prior art device is a design consideration within the skill of the art.

Referring to claim 25, Goddard, as modified discloses the pipe of claim 24 but does not disclose the intermediate corrugation is less than the outside pipe diameter. However, a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Therefore it would be obvious to one skilled in the art at the time of the invention to further modify the pipe disclosed by Goddard to have an intermediate corrugation with an outside diameter less than the outside pipe diameter because a change in the size of a prior art device is a design consideration within the skill of the art.

Art Unit: 3679

Referring to claim 26, Goddard discloses a corrugated pipe comprising two sections joined by telescopically mating a male end of one section with a female end of the other section, wherein the diameter of the female end (20) is substantially the same as the diameter of the corrugated pipe; and the male end (18) includes a corrugation having a recessed area (55) for accommodating an annular sealing element (60) for sealingly engaging an interior surface of the female end; and the corrugation height is such that the corrugation and the annular sealing element can be accommodated in the female end; the corrugated pipe section further comprising Goddard does not disclose an annular band of reinforcing material disposed around the exterior surface of the female end. Bonnema et al. teaches (see Fig. 9) a pipe with a reinforcing means (37) on an exterior surface. Bonnema et al. teaches that the reinforcing means holds the sections in position against any separation forces applied thereto (see col. 7, lines 16-20). Therefore it would be obvious to one skilled in the art at the time of the invention to modify the pipe disclosed by Goddard to include the reinforcing means taught by Bonnema et al. to keep the pipe sections in position against any separation forces applied.

Referring to claim 27, Goddard discloses wherein the male end also includes a second corrugation (32) that can be accommodated in the female end.

Referring to claim 28, Goddard discloses wherein the female end (20) includes a distal end into which the male end is inserted, and a third corrugation (42) with a crest that extends radially outwardly at least as far as the distal end of the female end.

Referring to claim 29, Goddard discloses a corrugated pipe for accommodating fluid flow, the pipe consisting of a material that deforms in response to internal water pressure and including two sections joined by telescopically mating a male end of one section with a female

Art Unit: 3679

end of the other section, the improvement comprising an annular sealing element (60) fixed to the exterior surface of the male end and disposed to sealingly engage the interior surface of the female end. Goddard does not disclose an annular reinforcement disposed around the exterior surface of the female end, the annular reinforcement having a width that is greater than the width of the sealing element and is disposed substantially upstream from the sealing element to resist loss of sealing engagement between the female end and the sealing element during use of the pipe. . Bonnema et al. teaches (see Fig. 9) a pipe with a reinforcing means (37) on an exterior surface. Bonnema et al. teaches that the reinforcing means holds the sections in position against any separation forces applied thereto (see col. 7, lines 16-20). Moreover, it would have been obvious to locate the reinforcing means in the generally area of the sealing means because it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Therefore it would be obvious to one skilled in the art at the time of the invention to modify the pipe disclosed by Goddard to include the reinforcing means taught by Bonnema et al. to keep the pipe sections in position against any separation forces applied and to locate the reinforcing means generally upstream of the seal because rearranging parts of an invention involves only routine skill in the art.

2. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goddard (209) in view of Bonnema et al. ('473) as applied to claims 1, 12 and above, and further in view of European Patent EP595742 to Courant.

Goddard, as modified, discloses the pipe of claims 1 and 12. Goddard, as modified, discloses a fourth corrugation but does not disclose the fourth corrugation has a fourth distance

Art Unit: 3679

that is greater than the first distance. Courant teaches (see Fig. 6) a pipe which includes a fourth corrugation (18), the fourth corrugation having a crest and a valley, with the distance between the crest and valley of the fourth corrugation being a fourth distance, with the fourth distance being greater than a first distance. Moreover, a change in the shape of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Therefore it would be obvious for one skilled in the art at the time of the invention to further modify the pipe disclosed by Goddard to have a fourth corrugation with a fourth distance that is greater than the first distance as taught by Courant because a change in the shape of a prior art device is a design consideration within the skill of the art.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 703-306-5707. The examiner can normally be reached on 7:30-4 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Art Unit: 3679

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

gmc

June 16, 2003



**Lynne H. Browne**  
**Supervisory Patent Examiner**  
**Technology Center 3670**